What is claimed is:

1. A method for detecting abnormal traffic at the network level using a statistical analysis, the method comprising the steps of:

a) gathering local traffic data from each network device and integrating a plurality of the local traffic data to generate traffic data in a network level;

b) extracting a characteristic traffic data based on the traffic data in the network level;

c) comparing the characteristic traffic data with a characteristic traffic data profile resulting from statistical computations, and determining whether there is abnormal traffic in the network; and

d) updating the characteristic traffic data profile using the characteristic traffic data if there is no abnormal traffic in the network, analyzing seriousness of the abnormal traffic and monitoring the abnormal traffic if there is abnormal traffic in the network.

2. The method as recited in claim 1, wherein the characteristic traffic data includes:

information on traffic assigned to an application port which is selected according to an application service;

information on traffic of which packet size is identical; and

information on traffic of which the number of source-

destination pairs, which represents the number of source addresses of the traffic having the same target address.

3. The method as recited in claim 1, further comprising the step of e) transmitting the analysis result of the seriousness of the abnormal traffic to an abnormal traffic processing system.

4. A computer-readable recording medium for storing a program that implements a method for detecting abnormal traffic at the network level using a statistical analysis, the method comprising the steps of:

a) gathering local traffic data from each network device and integrating a plurality of the local traffic data to generate traffic data in a network level;

b) extracting a characteristic traffic data based on the traffic data in the network level;

c) comparing the characteristic traffic data with a characteristic traffic data profile resulting from statistical computations, and determining whether there is abnormal traffic in the network; and

d) updating the characteristic traffic data profile using the characteristic traffic data if there is no abnormal traffic in the network, analyzing seriousness of the abnormal traffic and monitoring the abnormal traffic if there is abnormal traffic in the network.